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| 09/871,570 | 05/31/2001 | Sang Hoon Oh | 3593/7 | 3488 |

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NEW YORK, NY 10022

EXAMINER

MILORD, MARCEAU

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2682

16

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,570

Applicant(s)

OH ET AL.

Examiner

Marceau Milord

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35 is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer, Jr et al. (US Patent No 5588041) in view of Zurek et al (US Patent No 6636750 B1) and Faraci et al (US Patent No 5896461).

Regarding claims 1-18, Meyer, Jr et al discloses a portable (100 of figs. 1-2) hands-free adapter device (207 of fig. 2) for use with a cellular telephone (fig. 2), the device comprising: a loudspeaker electrically coupleable to the output of a cellular telephone (fig. 2); a microphone (105 of fig. 1 or 121 of fig. 3) electrically coupleable to the input of a cellular telephone (figs. 2-3; col. 5, line 25- col. 6, line 64); a housing (101 of fig. 1) containing the loudspeaker and microphone (105 of fig. 1 or 121 of fig. 3; col. 2, line 21- col. 3, line 66), the housing (101 of fig. 1) being approximately pocket-sized (col. 9, line 1- col. 10, line 52).

However, Meyer Jr et al does not specifically disclose the feature of a housing containing the loudspeaker and microphone the housing being approximately pocket-sized; and means for reducing internal howling within the housing.

On the other hand, Zurek et al, from the same field of endeavor, discloses a speakerphone, which is provided for use with a portable telephone. The speakerphone accessory has a high-level speaker assembly that includes a transducer coupled to first and second resonators. The high-level speaker assembly provides an acoustic bandpass having improved response when compared to the response of the transducer alone. In addition, the speakerphone accessory has a housing and porting structure which allows the accessory and attached portable to be used in a variety of positions without obstructing sound generated by the high-level speaker assembly (col. 2, lines 13-67). Furthermore, Zurek et al shows in figure 2, a control board 220, which is disposed inside the accessory housing 130 and is coupled to the connection port 144. The speakerphone accessory 100 includes its own echo cancellation software. By providing echo cancellation software in the speakerphone accessory 100, the accessory is made compatible with existing portable telephones (col. 3, line 19- col. 4, line 55). It is considered that the echo cancellers are used in order to reduce negative effects of howling or feedback since the speakerphone assembly may also include a system controller, it means that this device can reduce the sensitivity of the microphone or volume of the speaker.

However, Faraci et al discloses a compact speakerphone, which is provided with an angled housing for a speaker and a directional microphone. The speaker and microphone are mounted in the housing such that the directional characteristics of the microphone minimize feedback from the speaker. In addition, the speaker may be mounted upon an elevating bracket

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for suspending the speaker at a rotated position whereby the directional microphone remains oriented toward a user's mouth. The speakerphone also has echo cancellation circuitry that is provided in a compact housing which incorporates structural features for enhancing acoustic isolation of the microphone from the speaker (figs. 4, 8-9; col. 2, line 30- col. 3, line 20; col. 9, line 12- col. 10, line 54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Faraci to the modified system of Zurek and Meyer for the purpose of providing a compact speakerphone device which can be adapted to a cellular telephone, and which device can be included sound insulation material disposed around the microphone in order to reduce howling.

Regarding claim 19, Meyer, Jr et al discloses a portable (100 of figs. 1-2) hands-free adapter device for use with a cellular telephone (fig. 2), the device comprising: a loudspeaker electrically coupleable to the output of a cellular telephone (fig. 2); a microphone (105 of fig. 1 or 121 of fig. 3) electrically coupleable to the input of a cellular telephone (figs. 2-3; col. 5, line 25- col. 6, line 64); a housing (101 of fig. 1) containing the loudspeaker and microphone (105 of fig. 1 or 121 of fig. 3; col. 2, line 21- col. 3, line 66; col. 9, line 1- col. 10, line 52).

However, Meyer Jr et al does not specifically disclose the features of a housing containing the loudspeaker and microphone, the housing being approximately pocket-sized; attenuation circuitry coupled to the loudspeaker and microphone; and sound insulation positioned between the loudspeaker and microphone, wherein the attenuation circuitry and sound insulation reduce howling sufficiently to enable use of the device as a speakerphone.

On the other hand, Zurek et al, from the same field of endeavor, discloses a speakerphone, which is provided for use with a portable telephone. The speakerphone accessory

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has a high-level speaker assembly that includes a transducer coupled to first and second resonators. The high-level speaker assembly provides an acoustic bandpass having improved response when compared to the response of the transducer alone. In addition, the speakerphone accessory has a housing and porting structure which allows the accessory and attached portable to be used in a variety of positions without obstructing sound generated by the high-level speaker assembly (col. 2, lines 13-67). Furthermore, Zurek et al shows in figure 2, a control board 220, which is disposed inside the accessory housing 130 and is coupled to the connection port 144. The speakerphone accessory 100 includes its own echo cancellation software. By providing echo cancellation software in the speakerphone accessory 100, the accessory is made compatible with existing portable telephones (col. 3, line 19- col. 4, line 55). It is considered that the echo cancellers are used in order to reduce negative effects of howling or feedback since the speakerphone assembly may also include a system controller, it means that this device can reduce the sensitivity of the microphone or volume of the speaker.

However, Faraci et al discloses a compact speakerphone, which is provided with an angled housing for a speaker and a directional microphone. The speaker and microphone are mounted in the housing such that the directional characteristics of the microphone minimize feedback from the speaker. In addition, the speaker may be mounted upon an elevating bracket for suspending the speaker at a rotated position whereby the directional microphone remains oriented toward a user's mouth. The speakerphone also has echo cancellation circuitry that is provided in a compact housing which incorporates structural features for enhancing acoustic isolation of the microphone from the speaker (figs. 4, 8-9; col. 2, line 30- col. 3, line 20; col. 9, line 12- col. 10, line 54). Therefore, it would have been obvious to one of ordinary skill in the art

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at the time the invention was made to apply the technique of Faraci to the modified system of Zurek and Meyer for the purpose of providing a compact speakerphone device which can be adapted to a cellular telephone, and which device can be included sound insulation material disposed around the microphone in order to reduce howling.

Regarding claims 20-21, Meyer, Jr et al discloses a portable (100 of figs. 1-2) hands-free adapter device (207 of fig. 2) for use with a cellular telephone (fig. 2), the device comprising: a loudspeaker electrically coupleable to the output of a cellular telephone (fig. 2); a microphone (105 of fig. 1 or 121 of fig. 3) electrically coupleable to the input of a cellular telephone (figs. 2-3; col. 5, line 25- col. 6, line 64); a housing (101 of fig. 1) containing the loudspeaker and microphone (105 of fig. 1 or 121 of fig. 3; col. 2, line 21- col. 3, line 66; col. 9, line 1- col. 10, line 52).

However, Meyer Jr et al does not specifically disclose the features of a housing containing the loudspeaker and microphone the housing being approximately pocket-sized and forming a plane; and means for insulating sound positioned within the housing between the loudspeaker and microphone; wherein the outlet of the loudspeaker faces in a first direction substantially normal to the plane of the housing and the outlet of the microphone faces in a second direction substantially normal to the plane of the housing means for reducing internal howling within the housing.

On the other hand, Zurek et al, from the same field of endeavor, discloses a speakerphone, which is provided for use with a portable telephone. The speakerphone accessory has a high-level speaker assembly that includes a transducer coupled to first and second resonators. The high-level speaker assembly provides an acoustic bandpass having improved

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response when compared to the response of the transducer alone. In addition, the speakerphone accessory has a housing and porting structure which allows the accessory and attached portable to be used in a variety of positions without obstructing sound generated by the high-level speaker assembly (col. 2, lines 13-67). Furthermore, Zurek et al shows in figure 2, a control board 220, which is disposed inside the accessory housing 130 and is coupled to the connection port 144. The speakerphone accessory 100 includes its own echo cancellation software. By providing echo cancellation software in the speakerphone accessory 100, the accessory is made compatible with existing portable telephones (col. 3, line 19- col. 4, line 55). It is considered that the echo cancellers are used in order to reduce negative effects of howling or feedback since the speakerphone assembly may also include a system controller, it means that this device can reduce the sensitivity of the microphone or volume of the speaker.

However, Faraci et al discloses a compact speakerphone, which is provided with an angled housing for a speaker and a directional microphone. The speaker and microphone are mounted in the housing such that the directional characteristics of the microphone minimize feedback from the speaker. In addition, the speaker may be mounted upon an elevating bracket for suspending the speaker at a rotated position whereby the directional microphone remains oriented toward a user's mouth. The speakerphone also has echo cancellation circuitry that is provided in a compact housing which incorporates structural features for enhancing acoustic isolation of the microphone from the speaker (figs. 4, 8-9; col. 2, line 30- col. 3, line 20; col. 9, line 12- col. 10, line 54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Faraci to the modified system of Zurek and Meyer for the purpose of providing a compact speakerphone device which can be

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adapted to a cellular telephone, and which device can be included sound insulation material disposed around the microphone in order to reduce howling.

Regarding claim 22, Meyer, Jr et al discloses a portable (100 of figs. 1-2) hands-free adapter device (207 of fig. 2) for use with a cellular telephone (fig. 2), the device comprising: a loudspeaker electrically coupleable to the output of a cellular telephone (fig. 2); a microphone (105 of fig. 1 or 121 of fig. 3) electrically coupleable to the input of a cellular telephone (figs. 2-3; col. 5, line 25- col. 6, line 64); a housing (101 of fig. 1) containing the loudspeaker and microphone (105 of fig. 1 or 121 of fig. 3; col. 2, line 21- col. 3, line 66).

However, Meyer Jr et al does not specifically disclose the feature of a housing containing the loudspeaker and microphone, the housing being approximately pocket-sized; and means for insulating sound positioned within the housing between the loudspeaker and microphone.

On the other hand, Zurek et al, from the same field of endeavor, discloses a speakerphone, which is provided for use with a portable telephone. The speakerphone accessory has a high-level speaker assembly that includes a transducer coupled to first and second resonators. The high-level speaker assembly provides an acoustic bandpass having improved response when compared to the response of the transducer alone. In addition, the speakerphone accessory has a housing and porting structure which allows the accessory and attached portable to be used in a variety of positions without obstructing sound generated by the high-level speaker assembly (col. 2, lines 13-67). Furthermore, Zurek et al shows in figure 2, a control board 220, which is disposed inside the accessory housing 130 and is coupled to the connection port 144. The speakerphone accessory 100 includes its own echo cancellation software. By providing echo cancellation software in the speakerphone accessory 100, the accessory is made compatible with

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existing portable telephones (col. 3, line 19- col. 4, line 55). It is considered that the echo cancellers are used in order to reduce negative effects of howling or feedback since the speakerphone assembly may also include a system controller, it means that this device can reduce the sensitivity of the microphone or volume of the speaker.

However, Faraci et al discloses a compact speakerphone, which is provided with an angled housing for a speaker and a directional microphone. The speaker and microphone are mounted in the housing such that the directional characteristics of the microphone minimize feedback from the speaker. In addition, the speaker may be mounted upon an elevating bracket for suspending the speaker at a rotated position whereby the directional microphone remains oriented toward a user's mouth. The speakerphone also has echo cancellation circuitry that is provided in a compact housing which incorporates structural features for enhancing acoustic isolation of the microphone from the speaker (figs. 4, 8-9; col. 2, line 30- col. 3, line 20; col. 9, line 12- col. 10, line 54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Faraci to the modified system of Zurek and Meyer for the purpose of providing a compact speakerphone device which can be adapted to a cellular telephone, and which device can be included sound insulation material disposed around the microphone in order to reduce howling.

Regarding claim 23, Meyer, Jr et al discloses a portable (100 of figs. 1-2) hands-free adapter device (207 of fig. 2) for use with a cellular telephone (fig. 2), the device comprising: a loudspeaker electrically coupleable to the output of a cellular telephone (fig. 2); a microphone (105 of fig. 1 or 121 of fig. 3) electrically coupleable to the input of a cellular telephone (figs. 2-3; col. 5, line 25- col. 6, line 64); a housing (101 of fig. 1) containing the loudspeaker and

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microphone (105 of fig. 1 or 121 of fig. 3; col. 2, line 21- col. 3, line 66; col. 9, line 1- col. 10, line 52).

However, Meyer Jr et al does not specifically disclose the feature of a housing (101 of fig. 1) containing the loudspeaker and microphone (105 of fig. 1 or 121 of fig. 3; col. 2, line 21- col. 3, line 66), the housing (101 of fig. 1) being approximately pocket-sized forming a plane; wherein the outlet of the loudspeaker faces in a first direction substantially normal to the plane of the housing and the outlet of the microphone faces in a second direction substantially normal to the plane of the housing.

On the other hand, Zurek et al, from the same field of endeavor, discloses a speakerphone, which is provided for use with a portable telephone. The speakerphone accessory has a high-level speaker assembly that includes a transducer coupled to first and second resonators. The high-level speaker assembly provides an acoustic bandpass having improved response when compared to the response of the transducer alone. In addition, the speakerphone accessory has a housing and porting structure which allows the accessory and attached portable to be used in a variety of positions without obstructing sound generated by the high-level speaker assembly (col. 2, lines 13-67). Furthermore, Zurek et al shows in figure 2, a control board 220, which is disposed inside the accessory housing 130 and is coupled to the connection port 144. The speakerphone accessory 100 includes its own echo cancellation software. By providing echo cancellation software in the speakerphone accessory 100, the accessory is made compatible with existing portable telephones (col. 3, line 19- col. 4, line 55). It is considered that the echo cancellers are used in order to reduce negative effects of howling or feedback since the

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speakerphone assembly may also include a system controller, it means that this device can reduce the sensitivity of the microphone or volume of the speaker.

However, Faraci et al discloses a compact speakerphone, which is provided with an angled housing for a speaker and a directional microphone. The speaker and microphone are mounted in the housing such that the directional characteristics of the microphone minimize feedback from the speaker. In addition, the speaker may be mounted upon an elevating bracket for suspending the speaker at a rotated position whereby the directional microphone remains oriented toward a user's mouth. The speakerphone also has echo cancellation circuitry that is provided in a compact housing which incorporates structural features for enhancing acoustic isolation of the microphone from the speaker (figs. 4, 8-9; col. 2, line 30- col. 3, line 20; col. 9, line 12- col. 10, line 54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Faraci to the modified system of Zurek and Meyer for the purpose of providing a compact speakerphone device which can be adapted to a cellular telephone, and which device can be included sound insulation material disposed around the microphone in order to reduce howling.

Regarding claims 24-34, Meyer, Jr et al discloses a method for making a portable speakerphone device (100 of figs. 1-2) adaptable for use with a cellular telephone (figs. 2-3; col. 5, line 25- col. 6, line 64), the method comprising: providing a housing means (101 of fig. 1; col. 4, lines 7-64; col. 7, line 36- col. 8, line 59) disposing loudspeaker means within the housing means (101 of fig. 1); disposing microphone means (105 of fig. 1 or 121 of fig. 3; col. 2, line 21- col. 3, line 66; col. 9, line 1- col. 10, line 52).

However, Meyer Jr et al does not specifically disclose the steps of providing pocket sized housing means defining an exterior of the device; disposing loudspeaker means within the housing means; disposing microphone means within the housing means; providing means for reducing internal howling within the housing.

On the other hand, Zurek et al, from the same field of endeavor, discloses a speakerphone, which is provided for use with a portable telephone. The speakerphone accessory has a high-level speaker assembly that includes a transducer coupled to first and second resonators. The high-level speaker assembly provides an acoustic bandpass having improved response when compared to the response of the transducer alone. In addition, the speakerphone accessory has a housing and porting structure which allows the accessory and attached portable to be used in a variety of positions without obstructing sound generated by the high-level speaker assembly (col. 2, lines 13-67). Furthermore, Zurek et al shows in figure 2, a control board 220, which is disposed inside the accessory housing 130 and is coupled to the connection port 144. The speakerphone accessory 100 includes its own echo cancellation software. By providing echo cancellation software in the speakerphone accessory 100, the accessory is made compatible with existing portable telephones (col. 3, line 19- col. 4, line 55). It is considered that the echo cancellers are used in order to reduce negative effects of howling or feedback since the speakerphone assembly may also include a system controller, it means that this device can reduce the sensitivity of the microphone or volume of the speaker.

However, Faraci et al discloses a compact speakerphone, which is provided with an angled housing for a speaker and a directional microphone. The speaker and microphone are mounted in the housing such that the directional characteristics of the microphone minimize

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feedback from the speaker. In addition, the speaker may be mounted upon an elevating bracket for suspending the speaker at a rotated position whereby the directional microphone remains oriented toward a user's mouth. The speakerphone also has echo cancellation circuitry that is provided in a compact housing which incorporates structural features for enhancing acoustic isolation of the microphone from the speaker (figs. 4, 8-9; col. 2, line 30- col. 3, line 20; col. 9, line 12- col. 10, line 54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Faraci to the modified system of Zurek and Meyer for the purpose of providing a compact speakerphone device which can be adapted to a cellular telephone, and which device can be included sound insulation material disposed around the microphone in order to reduce howling.

Allowable Subject Matter

3. Claim 35 is allowed.

Response to Arguments

4. Applicant's arguments with respect to claims 1-34 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 703-306-3023. The examiner can normally be reached on Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MARCEAU MILORD

Marceau Milord

Examiner

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